

**REMARKS**

Applicant wishes to thank the Examiner for the attention accorded to the instant application.

Claims 1, 7-10 and 17-23 are pending in the application.

**I. Drawings**

The Examiner has objected to the drawings under 37 CFR 1.83(a) since the drawings do not show an image source as in claims 1 and 21. Applicants have submitted amended figures (with changes noted in red) for Examiner's approval. Upon Examiner's approval, Applicants will submit changes to the Specification to correspond with the changes in the figures.

**II. Claim Rejections – 35 U.S.C. §103**

The Examiner has rejected claim 1 as being unpatentable over U.S. Patent No. 6,309,072 to Deter ("Deter") in view of U.S. Patent No. 6,243,055 to Ferguson ("Ferguson"). The Examiner has rejected claims 7-10 under 35 U.S.C. §103 as being unpatentable over Deter in view of Ferguson, further in view of U.S. Patent No. 6,587,164 to Hashimoto et al. ("Hashimoto").

Applicants have amended claim 1 to more particularly point out and distinctly claim the subject matter considered as the invention. In particular, claim 1 has been amended to recite a second twisted nematic liquid crystal rotator disposed in a second light emission wherein the polarization angles of light emitted from each of the twisted nematic liquid crystal rotators are orthogonal to each other. The present invention, as

recited in amended claim 1, is directed to a system for displaying three-dimensional imagery. The system includes an image source, a first projector connected to the image source having a first light emission, a second projector connected to the image source having a second light emission, a first twisted nematic liquid crystal rotator disposed in the first light emission, a second twisted nematic liquid crystal rotator disposed in the second light emission, wherein the polarization angle of light emitted from each of the twisted nematic liquid crystal rotators are orthogonal to each other. Two nematic liquid crystal rotators aid in avoiding problems with cross talk or ghosting effects in 3D display systems.

In contrast, the cited references, either alone or in combination with each other, are directed to projection image systems for 2D imagery. None of the cited references deal with the problems of cross talk or ghosting effects. In particular, Deter is directed to a video projection system for displaying more than one image. Deter teaches that the number of projectors correspond to the number of images to be projected and that each projector has a spatial light bundle modulator for controlling the light intensity, specifically to address the problem of projecting large pictures.

Similarly, Fergason is directed to a optical display system with shifting of pixel positions to form delta to stripe patterns by time base multiplexing. The solution disclosed in Fergason is addressed to an opto-electrical dithering system and includes a birefringent material. Importantly, Fergason teaches a linear polarizing material which changes the direction of polarization of the emitted signals from a display system for alignment with the optical axis. The twisted nematic liquid crystal display disclosed in Fergason is directed merely to polarize a single beam from the display to accomplish

dithering. There is no teaching or suggestion in Ferguson of more than one twisted nematic liquid crystal rotator adjusted so that the polarization angles are orthogonal to each other.

Similarly, Hashimoto is directed to an active matrix type liquid crystal display device, at least material of one element, forming the connecting portion between signal transfer lines related to the scan lines and the data signal lines of the device, is an alloy of at least a chemical element selected from the group consisting of Nb, Mo, Ta, and W, with Cr. There is no teaching or suggestion in Hashimoto directed to more than one twisted nematic liquid crystal rotator adjusted so that the polarization angles are orthogonal to each other.

Applicants respectfully submit that even in combination, the references would not render the present invention, as recited in claim 1, obvious. First, there is no combined teaching or suggestion of a 3D display system. Additionally, the combination would not yield a dual projector system for 3D imagery with two different twisted nematic liquid crystal rotators exhibiting different polarization axes, where the polarization axes are orthogonal to each other.

Applicant respectfully submits that claim 1 is patentable over the cited references. Claims 7-10, by their dependency on amended claim 1, is similarly allowable.

### **III. Allowable Subject Matter**

The Examiner has indicated that claims 21-23 are allowable. The Examiner has additionally indicated that claims 17-20 are objected to as being dependent upon a


rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants wish to thank the Examiner for the indication of allowable subject matter. Applicants have canceled claims 17-20 and rewritten those claims as new claims 47-50 in independent form including all of the limitations of the base claim and any intervening claims. Applicants submit that claims 21-23 and 47-50 are now in condition for allowance.

#### **IV. Conclusion**

For the foregoing reasons, Applicants respectfully submit that all pending claims 1, 7-10, 21-23 and 47-50 are now in condition for allowance. Early notice to that effect is earnestly solicited.

Respectfully submitted,

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